

## IN THE CLAIMS

Please cancel Claims 22-42, and add new Claims 43-55:

~~43.~~ A process for preparing a cyclic compound comprising subjecting a starting material in the presence of a catalyst component to metathesis reaction in the presence of an ionic liquid,

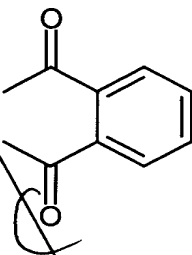
wherein the starting material is a  $\alpha,\omega$ -diene bearing a  $\alpha$  substituent  $\text{NRR}^1$  in the  $\alpha$  position to a double bond, wherein

R is hydrogen or an organic substituent,

$\text{R}^1$  is tert-butyl,  $\text{P}(\text{R})_2$ ,  $\text{P}(\text{R}^2)_2$ , COR,  $\text{SO}_2\text{PhR}$ , COOR or  $\text{CONRR}^2$ ,

$\text{R}^2$  is alkyl or phenyl,

or R and  $\text{R}^1$  together form



and

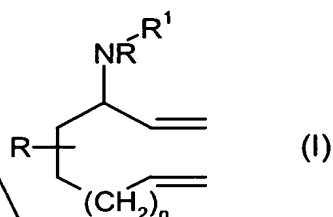
wherein  $\alpha,\omega$ -dienes optionally bear at least one further substituent R in any other position with the exception of the  $\alpha$  position,

wherein R is selected from the group consisting of hydrogen, fused or unfused aryl, alkyl, CN,  $\text{COOR}^2$  or halogen, and

wherein the starting material optionally contains a member selected from the group containing at least one further substituent that is inert in the metathesis reaction and a heteroatom selected from the group consisting of branched alkyl radicals, unbranched alkyl radicals, aromatic carbocyclic rings, non-aromatic carbocyclic rings, carboxylic acids, esters, ethers, epoxides, silyl ethers, thioethers, thioacetals, anhydrides, imines, silylenol ethers, ammonium salts, amides, nitriles, perfluoroalkyl groups, geminal dialkyl groups, alkynes, alkenes, halogens, alcohols, ketones, aldehydes, carbamates, carbonates, urethanes, sulfonates, sulfones, sulfonamides, nitro groups, organosilane units, metal centers and oxygen-containing heterocycles, nitrogen-containing heterocycles, sulfur-containing heterocycles and phosphorus-containing heterocycles,

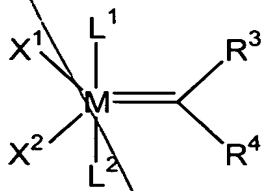
wherein the catalyst component includes homogeneous catalysts and heterogeneous catalysts selected from the group consisting of (i) transition metal carbenes, (ii) transition metal compounds that form transition metal carbenes under the reaction conditions, and (iii) transition metal salts in combination with an alkylating agent

44. The process of Claim 43, wherein the  $\alpha,\omega$ -dienes have the formula (I)

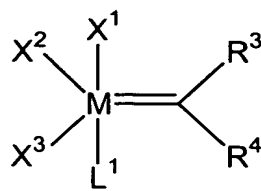


wherein R, R<sup>1</sup> and R<sup>2</sup> are as defined in Claim 43 and n is 1, 2, 3 or 4.

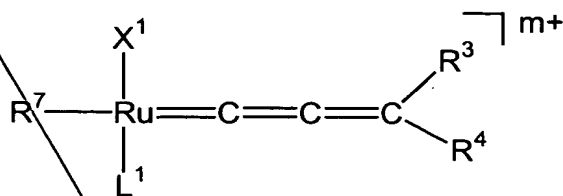
45. The process of Claim 43, wherein n is 1 or 2.
46. The process of Claim 45, wherein n is 1.
47. The process of Claim 43, wherein the  $\alpha,\omega$ -diene is diallylamine or 3-amino-1,7-octadiene, or 1,7-octadiene, 10-undecenoyl-allylamide, 1,4-bis-oxypropen-2-yl-but-2-ene or buten-4-yl 10-undecenoate.
48. The process of Claim 47, wherein the  $\alpha,\omega$ -diene is in N-carboxymethyl-protected form.
49. The process of Claim 43, wherein the catalyst component is a compound of formula (III), (IV), or (VI):



(III)



(IV)



(VI)

wherein M is ruthenium or osmium, and

wherein R<sup>3</sup> to R<sup>7</sup> are radicals selected from the group consisting of hydrogen, C<sub>1</sub>-C<sub>20</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, C<sub>2</sub>-C<sub>20</sub>-alkenyl, C<sub>2</sub>-C<sub>20</sub>-alkynyl, C<sub>6</sub>-C<sub>18</sub>-aryl, C<sub>1</sub>-C<sub>20</sub>-carboxylate, C<sub>1</sub>-C<sub>20</sub>-alkoxy, C<sub>2</sub>-C<sub>20</sub>-alkenyloxy, C<sub>2</sub>-C<sub>20</sub>-alkynyloxy, C<sub>6</sub>-C<sub>18</sub>-aryloxy, C<sub>2</sub>-C<sub>20</sub>-alkoxycarbonyl, C<sub>1</sub>-C<sub>20</sub>-alkylthio, C<sub>1</sub>-C<sub>20</sub>-alkylsulfonyl and C<sub>1</sub>-C<sub>20</sub>-alkylsulfinyl, N-aryl; wherein in each case unsubstituted or substituted by C<sub>1</sub>-C<sub>9</sub>-alkyl, perfluoroalkyl, halogen, C<sub>1</sub>-C<sub>5</sub>-alkoxy or C<sub>6</sub>-C<sub>18</sub>-aryl; and wherein the radicals R<sup>3</sup> to R<sup>7</sup> may be linked to one another in cyclic compounds,

X<sup>1</sup> to X<sup>3</sup> are anionic ligands are selected from the group consisting of F<sup>-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, CN<sup>-</sup>, SCN<sup>-</sup>, R<sup>3</sup>O<sup>-</sup>, R<sup>3</sup>R<sup>4</sup>N<sup>-</sup>, (R<sup>3</sup>-R<sup>7</sup>)-allyl<sup>-</sup>, (R<sup>3</sup>-R<sup>7</sup>)-cyclopentadienyl<sup>-</sup>, wherein the radicals R<sup>3</sup> to R<sup>7</sup> are as defined above,

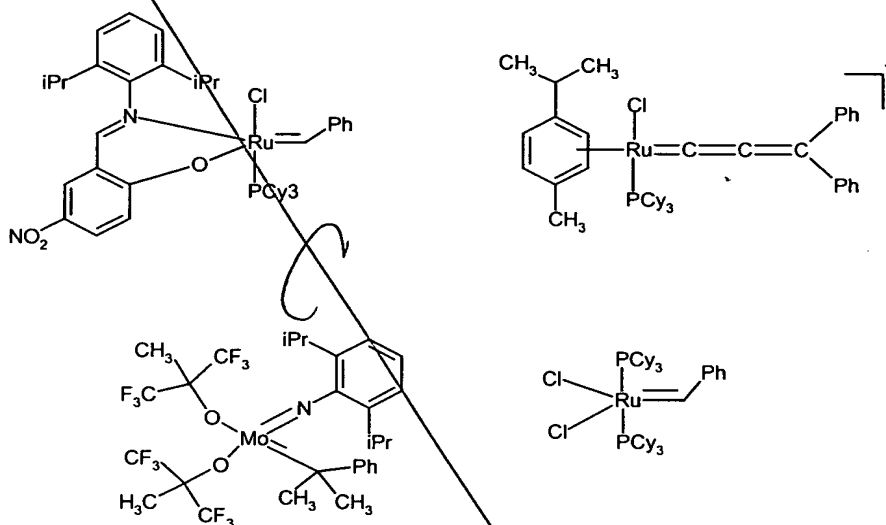
L<sup>1</sup> to L<sup>3</sup> are uncharged ligands are selected from the group consisting of CO, CO<sub>2</sub>, R<sup>3</sup>NCO, R<sup>3</sup>R<sup>4</sup>C=CR<sup>5</sup>R<sup>6</sup>, R<sup>3</sup>C≡CR<sup>4</sup>, R<sup>3</sup>R<sup>4</sup>C=NR<sup>5</sup>, R<sup>3</sup>C≡N, R<sup>3</sup>OR<sup>4</sup>, R<sup>3</sup>SR<sup>4</sup>, NR<sup>3</sup>R<sup>4</sup>R<sup>5</sup>, PR<sup>3</sup>R<sup>4</sup>R<sup>5</sup>, AsR<sup>3</sup>R<sup>4</sup>R<sup>5</sup>, SbR<sup>3</sup>R<sup>4</sup>R<sup>5</sup>, wherein the radicals R<sup>3</sup> to R<sup>5</sup> are as defined above and m is 1 or 2.

50. The process of Claim 49, wherein the catalyst component is a compound of the formula (III) and/or (IV), wherein L<sup>1</sup> and L<sup>2</sup> is PR<sup>3</sup>R<sup>4</sup>R<sup>5</sup>.

51. The process of Claim 50, wherein  $R^3$ ,  $R^4$ , and  $R^5$  are selected from the group consisting of aryl and alkyl groups.

52. The process of Claim 51, wherein  $R^3$ ,  $R^4$ , and  $R^5$  are selected from the group consisting of secondary alkyl radicals and cycloalkyl radicals.

53. The process of Claim 43, wherein the catalyst component is selected from one or more of the following compounds:



54. The process of Claim 43, wherein the ionic liquid is ammonium –hexafluorophosphate, ammonium tetrafluoroborate, ammonium tosylate, or ammonium hydrogen sulfate and salt mixtures comprising aluminium halides in combination with at least one quaternary ammonium halide and/or at least one quaternary phosphonium halide.

55. The process of Claim 43, wherein the ionic liquid is pyridinium hexafluorophosphate, pyridinium tetrafluoroborate, pyridinium hydrogen sulfate, 1-methyl-3-butylimidazolium hexafluorophosphate or combinations of aluminium chloride with 1-methyl-3-butylimidazolium chloride, 1-methyl-3-ethylimidazolium chloride, N-butylpyridinium chloride and tetrabutylphosphonium halide.--